AMENDMENTS TO THE CLAIMS

1 – 15. (Cancelled)

16. (New) A semiconductor device comprising a plurality of IC elements including at least an input stage IC element and an output-stage IC element and mounted on a common mounting substrate/board, and signal transmission paths that connect each two of said plurality of IC elements to achieve impedance matching therebetween, where in that:

an input impedance of said input-stage IC element and an output impedance of said output-stage IC element are equal to a first impedance; and

each of at least two of said plurality of IC elements are impedance-matched to a corresponding one of said signal transmission paths at a matching impedance which is higher than said first impedance.

17. (New) The semiconductor device according to claim 16, wherein said plurality of IC elements include a plurality of IC element groups, each of which is mounted on a common mounting substrate/board.

18. (New) The semiconductor device according to claim 16, wherein said matching impedance differs between two of said signal transrnission paths.

19. (New) The semiconductor device according to claim 16, wherein at least one of said plurality of IC elements has a resistance element for said impedance matching in said input circuit and/or said output circuit.

20. (New) The semiconductor device according to claim 19, wherein said output circuit is a differential circuit.

21. (New) The semiconductor device according to claim 19, wherein said input circuit is an emitter-follower circuit, and said resistance element is connected between a base and a ground, or between a base and a power source.

22. (New) The semiconductor device according to claim 19, wherein said input circuit is a source-follower circuit, and said resistance element is connected between a gate and a ground, or between a gate and a power source.

23. (New) The semiconductor device according to claim 16, wherein at least one of said IC elements includes an ECL circuit.

24. (New) The semiconductor device according to claim 16, wherein at least one of said IC elements is a bare chip.

25. (New) The semiconductor device according to claim 16, wherein at least one of an input circuit of said input-stage IC element and an output circuit of said output-stage IC element is connected to an external circuit through a coaxial cable.

26. (New) The semiconductor device according to claim 16, wherein a signal to be input to said input-stage IC element has a transmission rate not less than 1 Gbps or a frequency not less than 800 MHz.

27. (New) The semiconductor device according to claim 16, wherein said matching impedance is not more than ten times said first impedance.

28. (New) The semiconductor device according to claim 16, wherein said matching impedance is not less than double said first impedance.

29. (New) A semiconductor device comprising a plurality of IC elements including at least an input-stage IC element and an output-stage IC element and mounted on a common mounting substrate/board, and signal transmission paths that connect each adjacent two of said plurality of IC elements to achieve impedance matching therebetween, where in:

an input impedance of said input-stage IC element and an output impedance of said output-stage IC element are first impedance and second impedance, respectively; and

each of at least two of said plurality of IC elements is impedance matched to a corresponding one of said signal transmission paths at a matching impedance higher than a lower one of said first and second impedances.

30. (New) The semiconductor device according to claim 29, wherein said plurality of IC elements include a plurality of IC element groups, each of which is mounted on a common mounting substrate/board.

31. (New) The semiconductor device according to claim 29, wherein said matching impedance differs between two of said signal transmission paths.

32. (New) The semiconductor device according to claim 29, wherein at least one of said plurality of IC elements has a resistance element for said impedance matching in said input circuit and/or said output circuit.

33. (New) The semiconductor device according to claim 32, wherein said output circuit is a differential circuit.

34. (New) The semiconductor device according to claim 32, wherein said input circuit is an emitter-follower circuit, and said resistance element is connected between a base and a ground, or between a base and a power source.

35. (New) The semiconductor device according to claim 32, wherein said input circuit is a source-follower circuit, and said resistance element is connected between a gate and a ground, or between a gate and a power source.

36. (New) The semiconductor device according to claim 29, wherein at least one of said IC elements includes an ECL circuit.

37. (New) The semiconductor device according to claim 29, wherein at least one of said IC elements is a bare chip.

38. (New) The semiconductor device according to claim 29, wherein at least one of an input circuit of said input-stage IC element and an output circuit of said output-stage IC element is connected to an external circuit through a coaxial cable.

39. (New) The semiconductor device according to claim 29, wherein a signal to be input to said input-stage IC element has a transmission rate not less than 1 Gbps or a frequency not less than 800 MHz.

40. (New) The semiconductor device according to claim 29, wherein said matching impedance is not more than ten times said first impedance.

41. (New) The semiconductor device according to claim 29, wherein said matching impedance is not less than double said first impedance.